COMMERCIAL SERVICES

Commercial Services includes the provision of technical systems and specialised forecasting services to specific clients in the energy, mining, agriculture, communication and transportation sectors. Tailored services are also developed and provided to government and private users on a commercial basis. These services are provided through the Bureau's commercially operating Special Services Unit (SSU).

PLANNED OUTCOME 2007-08

Outcome	Enhanced community safety and well-being through preparation of meteorological and related products and information and the effective use of meteorological and related services by the general public and other major social, environmental and economic sectors.
Objective	To meet the need for effective application of meteorological information and expertise in the national interest through the provision of commercial services to specialised users.
Effectiveness indicators	The extent to which: • commercial services contribute to: - minimising loss of life and property and community disruption from bushfires, tropical cyclones and severe storms; - minimising economic and other costs of disaster preparedness; - the safety, comfort, convenience and general welfare and economic benefit of the public and major community groups; - the safety and efficiency of shipping, small craft and maritime industries; - government and community planning; - the management of the environment, including natural resources; and - the economy and efficiency of primary and secondary industry; • forecasts, warnings, information and advice are accurate and timely; • user needs are identified and, within available resources, are satisfied and new services and products are developed as opportunities arise; and • the public, major user groups and specialised users receive, understand and make optimum use of the services and express satisfaction with the services.

OUTPUTS 2007-08

Commercial Services forms one of the eight Major Outputs of the Bureau and contributes to Output Group 1.3 - Meteorological and Related Services and Products. Outputs from Commercial Services typically include specialised meteorological data, products and services which fall outside of those services the Bureau is funded to provide, and which are charged for on a commercial basis.

OUTPUT PERFORMANCE 2007-08

Output performance is measured against a number of quality, quantity and price targets. The results achieved for 2007-08 are provided below along with a commentary on significant variations.

Quality	Target	Actual
Percentage growth in revenues of the Special Services Unit (SSU)	5%	9%
Quantity		
Percentage of commercial contracts completed on time Percentage of existing clients renewing commercial contracts	90% 90%	90% 90%
Price		
Commercial Services	$5.502m	$8.865m

Comments on output performance

The SSU exceeded its price and revenue growth targets by a large amount because it not only continued to maintain a solid list of long-term clients, with a 90 per cent service renewal rate, but was also very successful in winning additional business during 2007-08, particularly in the resource sector. The new business included a contract for work contributing to the establishment of Indonesia's first Tropical Cyclone Warning Centre in Jakarta.

ACHIEVING THE OUTCOME

The Australian Bureau of Meteorology established the Special Services Unit (SSU) in 1990 to provide, on a commercial basis, a range of specialised meteorological and related systems and services to both international and national clients. It has developed into a successful entity, having built a reputation through the professional and effective implementation of projects and services throughout Australia and in more than a dozen countries internationally. SSU offices are located in Melbourne, Perth, Sydney, Brisbane and Darwin. The SSU operates on the basis of competitive neutrality with the private sector and non-interference with the public good functions of overseas National Meteorological and Hydrological Services (NMHSs).

OVERVIEW OF 2007-08

The use of reliable and accurate weather services continued to assist clients to safely and more efficiently manage their operations during 2007-08. Knowledge of relevant weather events, including their intensity, frequency and nature, and ongoing development work for

forecast services to meet the needs of weather-sensitive clients, provided them with an important risk management tool.

The SSU was the key provider of forecasts and warnings in the Australian offshore oil and gas, mining, marine, energy and industrial sectors. The offshore oil and gas sector remained particularly busy, with the strong demand for services to assist with exploration and production showing no signs of abating. In the mining sector the resources boom in coal and minerals production continued and site-specific, customer focussed weather services proved valuable as operational tools.

The energy sector experienced some consolidation in the generation, transmission and distribution networks, which slightly reduced the number of products and services the SSU was contracted to provide. However, strong demand for commercial services continued in this sector.

Services to the agricultural sector decreased, as drought continued in some parts of the country. A rationalisation of some services was achieved by the automation of product preparation and delivery.

The SSU sought to develop new products and services to support its existing client base and to streamline its forecast preparation infrastructure. However this work was hampered in 2007-08 by the participation in international projects, which continued longer than intended, and a general reduction in available resources.

The decision was taken by the Bureau towards the end of 2007-08 to change the way in which Commercial Services is delivered by the organisation, with the planned cessation of the operation of the Special Services Unit as an organisational entity at the end of June.

Major developments 2007-08

- The Bureau, through the SSU, provided essential maintenance services to the US Department of Energy's Atmospheric Radiation Measurement (ARM) Program, at the Program's Tropical Western Pacific Climate Research Facilities in Darwin, Manus Island in Papua New Guinea and Nauru, as well as the ARM Mobile Facility. The ARM Program, which continues to be the largest research program funded by the US Department of Energy, is working towards the improvement of computer-based climate models.
- Installation of a weather radar system for Meteo France on Lifou Island in the Loyalty Islands east of New Caledonia was completed in June.
- A specialised tropical cyclone forecasting system comprising a suite of meteorological applications and supporting infrastructure was provided to the Badan Meteorologi dan Geofisika (BMG - the Indonesian Meteorological and Geophysical Agency). The SSU also supplied a new satellite reception system enabling the BMG to receive new high-resolution imagery from the Japanese MTSAT geostationary meteorological satellite. Detailed systems planning commenced in July and the Jakarta Tropical Cyclone Warning Centre commenced operations in January.
- A significant increase in staff in the Western Australia office of the SSU supported the introduction of an improved tropical cyclone forecast service, which gives greater detail to the client in an easy-to-read format, as well as a new seven-day tropical cyclone outlook service designed to provide a longer term assessment of the risk of cyclone development. The average number of forecasts issued daily by the Western Australia office grew to over 100.

- The SSU completed the second stage of a project for the Sydney Catchment Authority (SCA). Automated systems were developed for delivering quantitative rainfall estimates from the Rainfields system developed by the Centre for Australian Weather and Climate Research (a joint Bureau/CSIRO research operation) to the SCA's water catchment forecasting models.
- In collaboration with an agricultural consulting firm, a trial SMS alert system was developed in support of crop spraying in western Victoria. The system issued SMS alerts if the indicated conditions were becoming favourable (or unfavourable) for spraying. The SSU helped the firm run a three-month trial of the system, with a view to making it operational in the future.
- Very high frequency (VHF) radio installations were completed for airports at Grafton and Moruya in New South Wales, Port Lincoln in South Australia, and Karratha, Mt Newman and Truscott-Mungalalu in Western Australia. The VHF radios enable aircraft pilots to receive one-minute weather observations on their approach to airports which are equipped with automatic weather stations.

Contribution towards outcome

- The ARM Program contributes to an improved scientific understanding of the fundamental physics related to interactions between clouds and radiative feedback processes in the atmosphere and generates data products that promote the advancement of climate models. Effective calibration and maintenance of the instrumentation allows the research and general communities to use the data obtained with confidence.
- The additional radar extends the geographic coverage by the existing radars at Tiebaghi and Noumea into the area east of New Caledonia including the Loyalty Islands and enhances the overall capability of the meteorological service in New Caledonia to monitor tropical cyclones and other convective activity for the benefit of both its local community and the wider region that relies on its forecasts and warnings.
- The deployment of the Bureau's forecasting systems to other National Meteorological and Hydrological Services assists them in providing their communities with

The Zeppelin NT circles around the ARM Mobile Facility in Heselbach, Germany, collecting air samples and recording vertical air column data. Deployment was part of the Convective and Orographically-induced Precipitation Study, conducted by the World Meteorological Organization's World Weather Research Programme in the latter half of 2007.

the social and economic benefits stemming from improved weather forecast and warning services.

- Enhanced tropical cyclone forecast and warning products and service benefit the operations of major economic sectors such as mining. Such customised forecast services, which are an essential part of both daily operations and longer term planning for industries in these sectors, also contribute to the monitoring of environmental and other impacts (such as air quality and noise) of mining and related operations on local communities.
- The rainfall data delivery system provided to the SCA is aimed at improving its real-time operations by providing more accurate input to its water catchment forecasting models. The output from these, in turn, contributes to the better management of Sydney's water supply.
- The development and implementation of improved weather-related alert services for agriculture enables the industry to better understand the risks relating to their particular activities and hence to more efficiently manage their operations.
- VHF radio installations contribute to increased passenger safety by enabling pilots to obtain up-to-the-minute information on ground conditions at the point of destination.

Under the keen eye of Bureau of Meteorology and Meteo France personnel, the first of two 7.5 metre sections of the New Caledonian radar tower is lowered onto its base.